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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,267	11/20/2001	Wee Mon Wong	I3343US01	9586

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EXAMINER

DU, THUAN N

ART UNIT PAPER NUMBER

2116

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/989,267

Applicant(s)

WONG, WEE MON

Examiner

Thuan N. Du

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Drawings (dated 3/4/02).
2. Claims 1-36 are presented for examination.

#### ***Drawings***

3. The drawings are objected to because the "Stock\_en" signal in Fig. 5 should be -- Stack\_en -- as described in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta (U.S. Patent No. 4,607,345).

6. Regarding claims 1 and 19, Mehta teaches an apparatus for converting serial data having one transmission rate into corresponding serial data of another transmission rate [col. 2, lines 10-14], the apparatus comprising:

receiving means arranged to store the data [col. 25, lines 33-35] clocked in response to first clock signal [col. 25, lines 36-38];

a first signal generator responsive to the first clock signal arranged to generate a first enable signal after predetermined number of cycles of the first clock signal dependant on the number of first flip-flops [col. 10, lines 58-60];

transmitting means arranged to transmit the data in serial form at a second rate in response to second clock [col. 25, lines 39-45].

buffer means interposed between the receiving means and the transmitting means for receiving data from the receiving means and transmit data to transmitting means.

In summary, applicant claimed an apparatus which receives serial data at a first data transmission rate, converting the data into parallel data and transmitting the data to another storage device at a second data transmission rate, the data is then converted back to serial data

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for outputting at the second data transmission rate. Mehta teaches the invention substantially as the invention claimed by applicant.

7. Regarding claims 2 and 20, one of ordinary skill in the art would have recognized that a plurality of cycles of clock signal are needed for storing a plurality of bits of serial data.

Therefore, it would have been obvious to one of ordinary skill in the art that the receiving means taught by Mehta arranged to store a plurality of bits of serial data in response to a plurality of cycles of the first clock signal.

8. Regarding claims 3-4 and 21-22, one of ordinary skill in the art would have recognized that  $n$  bits of data arranged to store in a memory in parallel fashion would need only one clock cycle. Therefore, it would have been obvious to one of ordinary skill in the art to recognize that the data transmitted from the receiving means to the transmitting means taught by Mehta would need only a single cycle of the clock signal.

9. Regarding claims 5-6 and 23-24, Mehta teaches a counter for controlling the serial-parallel converter [Fig. 11].

10. Regarding claims 7 and 25, since the parallel-serial converter taught by Mehta outputting data in serial fashion, the data is outputted one-at-a-time [Fig. 11].

11. Regarding claims 8 and 26, it is a matter of design choice to implement the number of flip-flops to be three or less depends on the number of bits received.

12. Regarding claims 9-18 and 27-36, since they recite method of operating of the apparatus defined in the apparatus claims, they are rejected accordingly based on the rejection of the apparatus claims.

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***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan N. Du whose telephone number is (571) 272-3673. The examiner can normally be reached on Monday and Wednesday-Friday: 10:00 AM - 8:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (571) 272-3670.

Central TC telephone number is (571) 272-2100.

The fax number for the organization is (703) 872-9306.

A handwritten signature in black ink, appearing to read 'Thuan N. Du', with a stylized flourish extending to the right.

Thuan N. Du  
November 4, 2004